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SANTA CRUZ BIOTECHNOLOGY, INC.

MYBPC1 siRNA (m): sc-149730

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

MYBPC1, also known as MYBPCS (myosin-binding protein C, slow-type) or MyBP-C, is a 1,141 amino acid protein that contains three fibronectin type-III domains and seven Ig-like C2-type domains. Existing as a member of the immunoglobulin superfamily, MYBPC1 functions as a thick filament-associated protein that localizes to striated muscle bands in vertebrae and is thought to modify the activity of select ATPases. Additionally, MYBPC1 may play a role in the modulation of muscle contraction and in the overall structural integrity of the cell. The gene encoding MYBPC1 maps to human chromosome 12, which encodes over 1,100 genes and comprises approximately 4.5% of the human genome. Chromosome 12 is associated with a variety of diseases and afflictions, including hypochondrogenesis, achondrogenesis, Kniest dysplasia, Noonan syndrome and Trisomy 12p, which causes facial developmental defects and seizure disorders.

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CHROMOSOMAL LOCATION

Genetic locus: Mybpc1 (mouse) mapping to 10 C1.

PRODUCT

MYBPC1 siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see MYBPC1 shRNA Plasmid (m): sc-149730-SH and MYBPC1 shRNA (m) Lentiviral Particles: sc-149730-V as alternate gene silencing products.

For independent verification of MYBPC1 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-149730A, sc-149730B and sc-149730C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

MYBPC1 siRNA (m) is recommended for the inhibition of MYBPC1 expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor MYBPC1 gene expression knockdown using RT-PCR Primer: MYBPC1 (m)-PR: sc-149730-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.